

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of  
**Fournier et al.**

Examiner: Unknown

Art Unit: Unknown

Application No.: **To Be Assigned**

Filed: **January 29, 2004**

Title: **POLYPEPTIDES CAPABLE OF  
INTERACTING WITH HUMAN  
TOPOISOMERASE III ALPHA**

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

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EL964838896US

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**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. 1.56, 1.97 AND 1.98**

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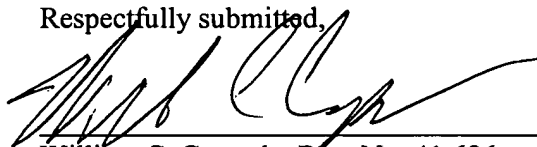
Applicants submit herewith patents, publications, and other information of which they are aware, which they believe may be material, as defined in 37 C.F.R. 1.56(b), to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. 1.56(a). While the information referred to in this Information Disclosure Statement may be material pursuant to 37 C.F.R. 1.56(b), the filing of this Information Disclosure Statement is not intended to, pursuant to 37 C.F.R. 1.97(h), constitute an admission that any patent, publication or other information referred to is, or is considered to be, material to the patentability of this invention. Pursuant to 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information exists.

- ☒ (a) This Information Disclosure Statement is filed within the period set forth in §1.97(b) because it accompanies the new patent application submitted herewith, is filed within three months of the filing date of a national application or within three months of the date of entry of the national stage as set forth in §1.491 in an international application, or is believed to be filed before the mailing date of a first Office Action on the merits, whichever event occurs last. However, in the event that the first office action has been mailed, the Commissioner is authorized to charge any fees under 37 C.F.R. 1.17(p) or credit any overpayment to Account No. **18-1982**.

- ☐ (b) This Information Disclosure Statement is filed after the period set forth in 37 C.F.R. 1.97(b), but is believed to be filed before the mailing date of a final action under §1.113 or a notice of allowance under §1.311, whichever occurs first.
- ☐ (1) The undersigned attorney certifies that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement;
- ☐ (2) The undersigned attorney certifies that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned attorney after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of this statement; or
- ☐ (3) This Information Disclosure Statement is accompanied by a transmittal letter in which payment of the fee set forth in §1.17(p) and required by 37 C.F.R. 1.97(c) is authorized.

The items listed with an asterisk on the attached PTO-1449 (modified) have been previously submitted by the examiner or the applicant in related applications of this series. Therefore, a copy of the reference(s) are not enclosed with this Information Disclosure Statement.

Respectfully submitted,



William C. Coppola, Reg. No. 41,686

Aventis Pharmaceuticals Inc.  
Patent Department  
Route #202-206 / P.O. Box 6800  
Bridgewater, NJ 08807-0800  
Telephone (908) 231-4854  
Telefax (908) 231-2626

Docket No. ST98045 US DIV

FORM PTO-1449 (Modified)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. <b>ST98045 US PCT</b>	SERIAL NO. <b>09/856,930</b>
INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)		APPLICANT <b>FOURNIER, ET AL</b>	
		FILING DATE <b>JUNE 25, 2001</b>	GROUP <b>1642</b>

### U.S. PATENT DOCUMENTS

EXAMINER INITIALS	*	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLAS S	FILING DATE IF APPROPRIATE

### FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	*	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLAS S	TRANSLATION YES NO
		AA	9 8 4 6 7 6	22.01.98	WO		

### OTHER DOCUMENTS

EXAMINER INITIALS	*	AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		AB ✓ Confalonieri <i>et al.</i> Reverse gyrase: A helicase-like domain and a type I topoisomerase in the same polypeptide. Proc. Natl. Acad. Sci. USA 90:4753-4757 (1993)
		AC ✓ Chung, J. <i>et al.</i> Identification of a Human Homolog of a Putative RNA Helicase Gene (mDEAD3) Expressed in Mouse Erythroid Cells. Korean J. Biochem. 27:193-197 (1995).
		AD ✗ Ellis, N. <i>et al.</i> The Bloom's Syndrome Gene Product is Homologous to RecQ Helicases. Cell 83:655-666 (1995).
		AE ✗ Forterre, P. <i>et al.</i> High Positive Supercoiling <i>in vitro</i> catalyzed by an ATP and polyethylene glycol-stimulated topoisomerase from <i>Sulfolobus acidocaldarius</i> . EMBO Journal 4(8):2123-2128 (1985).
		AF ✗ Fritz, E. <i>et al.</i> Overexpression of a truncated human topoisomerase III partially corrects multiple aspects of the ataxia-telangiectasia phenotype. PNAS USA 94:4538-4542 (1997).
		AG ✓ Gangloff, S. <i>et al.</i> The Yeast Type I Topoisomerase TOP3 Interacts with SGS1, a DNA Helicase Homolog: a Potential Eukaryotic Reverse Gyrase. Mol. and Cellular Biology 14(12):8391-8398 (1994).
		AH ✗ Gee, S <i>et al.</i> Mouse erythroid cells express multiple putative RNA helicase genes exhibiting high sequence conservation from yeast to mammal. Gene 140:171-177 (1994).
		AI ✗ Goulaouic, H. <i>et al.</i> Purification and Characterization of human DNA topoisomerase III $\alpha$ . Nuc. Acid Res. 27(12):2443-2450 (1999).
		AJ ✗ Hanai <i>et al.</i> Human TOP3: A single-copy gene encoding DNA topoisomerase III. PNAS USA 93:3653-3657 (1996).
		AK ✗ Lahn <i>et al.</i> Functional Coherence of the Human Y Chromosome. Science 278:765-680 (1997).
		AL ✗ Li, W. <i>et al.</i> Mammalian DNA topoisomerase III $\alpha$ is essential in early embryogenesis. PNAS USA 95:1010-1013 (1998).
		AM ✓ Mullen <i>et al.</i> Human homologues of yeast helicase. Nature 383:678-679 (1996).
		AN ✗ Ng, S. <i>et al.</i> A new human topoisomerase III that interacts with SGS1 protein. Nucl. Acids Res. 27(4):993-1000 (1999).
		AO ✗ Rothstein & Gangloff Hyper-recombination and Bloom's Syndrome: Microbes Again Provide Clues about Cancer. Genome Research 5:421-426 (1995).
		AP ✗ Seki, T. <i>et al.</i> Isolation of a cDNA encoding mouse DNA Topoisomerase III which is highly expressed at the mRNA level in the testis. Biochim. et Biophys. Acta 1396:127-131 (1998)
		AQ ✗ Wang, J. DNA Topoisomerases: Why so Many? J. Biol. Chem. 266(11):6659-6662 (1991).

EXAMINER	DATE CONSIDERED
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**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**Note:** Asterisk (\*) item(s) have been previously cited in a related application(s) either by the applicant or by the USPTO and therefore copies of the reference(s) are not being submitted.